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EXAMINER

AHN, SANGWOO

ART UNIT

PAPER NUMBER

2168

NOTIFICATION DATE

DELIVERY MODE

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ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

lhptoms@leehayes.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/624,759	<b>Applicant(s)</b> WEN ET AL.	
	<b>Examiner</b> SANGWOO AHN	<b>Art Unit</b> 2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 – 9, 11 – 20, 22 – 24, 26, 28 – 30 and 33 – 49 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 – 9, 11 – 20, 22 – 24, 26, 28 and 38 – 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

Claims 1 – 9, 11 – 20, 22 – 24, 26, 28 – 30 and 33 – 49 are pending in this application.

Claims 1, 20, 22 – 23, 28 – 29, 33 and 40 have been amended.

Claims 10, 21, 25, 27 and 31 – 32 have been canceled.

With respect to claims 29 and 33, the amendments have placed the claims in condition for allowance. The claims contain allowable subject matter.

### ***Response to Arguments***

Applicant's arguments filed 12/2/2009 with respect to claims 1, 20, 38 and 44 have been fully considered but they are not persuasive.

Applicant made basically two main arguments. First, applicant argued that neither Pitkow nor Holbrook teaches that objects in a particular one of the concentric portions have a same rank. Second, applicant argued that Ikeda also fails to disclose that objects in a particular one of the concentric portion shave a same rank. With respect to the first argument, Examiner agrees with the Applicant's position: Pitkow Holbrook does not explicitly indicate that objects in a particular one of the concentric circles have a same rank. However, Examiner respectfully traverses the second argument because Ikeda discloses organizing data elements (including documents) in concentric circles, wherein the distance from the center is indicative of similarity of the

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data element. In other words, if two data elements have the same similarity value, they will be placed in the same concentric circle (Figures 6 – 8, column 7 lines 36 – 59, column 23 line 52 – column 24 line 6, et seq.). Therefore, Ikeda sufficiently discloses concept of placing objects of same similarity value in the same concentric circle, wherein the radius is indicative of the similarity.

For the foregoing reasons, claims 1 – 9, 11 – 20, 22 – 24, 26, 28, and 38 – 48 are rejected under 35 USC 103.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

**Claims 1 – 9, 11 – 15, 18 - 20, 22 – 24, 26, 28 and 38 – 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,457,028 issued to Pitkow et al. and U.S. Publication Number 2002/0152222 issued to Holbrook, further in view of U.S. Patent Number 6,564,206 issued to Ikeda**

Regarding claim 1, Pitkow discloses,

A computerized method comprising:

identifying, from a plurality of objects, a set of core objects for a data structure corresponding to a community of objects (Figure 2 elements 201 – 205, column 3 lines 1 – 5, column 5 lines 54 – 63, et seq.) by identifying one or more objects that are referenced by at least a threshold number of other objects of the plurality of objects (column 3 line 10, column 5 lines 54 – 63, column 7 lines 64 – 65, column 8 lines 18 – 22, et seq.); and

expanding, based on the set of core objects, the data structure corresponding to the community of objects to include a set of affiliated objects, wherein the set of core objects and the set of affiliated objects are maintained as distinct entities within the data structure (See Response to Arguments above, Figure 2 elements 206 – 207: generating co-citation clusters and document clusters, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1: creating a set of clusters whose elements are indirectly or directly related by co-citation, column 7 lines 8 – 10: topology of a Web site reflects the organization of a community, et seq.); and

accessing at least one element of the data structure with a processor of a computer (column 3 line 28: find related web sites, et seq.);

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merging together a first community of the plurality of communities and a second community of the plurality of communities if there is sufficient similarity between the core objects in the first community and the core objects in the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Pitkow does not explicitly disclose assigning a set of core objects to a center portion of a user interface independent model and each affiliated object in the set of affiliated objects to a particular concentric portion around the center of the model.

However, Holbrook discloses assigning a set of core objects to a center portion of a user interface independent model and each affiliated object in the set of affiliated objects to a particular concentric portion around the center of the model (Figure 4, paragraph 77: the examiner would also like to note that the arrangement of objects shown in Figure 4 supports the inherent data organization in the data structure since, without the underlying data structure organized in the way displayed to the user, the display of the categorized objects in concentric circles could not be achieved. Just because the objects are displayed in a certain way, it does not suggest that they are graphics-dependent, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's assignment method would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

Pitkow and Holbrook do not explicitly disclose that each concentric portion represents an importance level to the community and the closer each concentric portion is to the center portion represents a higher level of importance and that each object within each concentric portion shares the same importance level.

However, Ikeda discloses organizing data elements (including documents) in concentric circles, wherein the distance from the center is indicative of similarity of the data element. In other words, if two data elements have the same similarity value, they will be placed in the same concentric circle (Figures 6 – 8, column 7 lines 36 – 59, column 23 line 52 – column 24 line 6, et seq.). Therefore, Ikeda sufficiently discloses concept of placing objects of same similarity value in the same concentric circle, wherein the radius is indicative of the similarity. It would have been obvious to a person of ordinary skill in the data processing art to combine the references because Ikeda's assignment method would have enabled Pitkow and Holbrook's system to arrange a plurality of information in correspondence with the distribution of matching levels or relevancy (column 1 lines 40 – 50, et seq.)

Regarding claim 2, Pitkow discloses,  
repeating the identifying and expanding for a plurality of communities of objects, wherein the objects in each community of objects are all from the plurality of objects (column 6 lines 5 – 8, et seq.).

Regarding claim 3, Pitkow discloses,  
wherein the merging results in a merged community including all of the objects of the first community and the second community and having a set of core objects that

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includes the core objects in the first community and the core objects in the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 4, Pitkow discloses,

merging together a first community of the plurality of communities and a second community of the plurality of communities if there is sufficient similarity between the core and affiliated objects in the first community and the core and affiliated objects in the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 67, column 8 lines 15 – 28, column 10 line 15, et seq.).

Regarding claim 5, Pitkow discloses,

identifying a first community of the plurality of communities and a second community of the plurality of communities; determining whether the first community and second community satisfy one or more constraints; and merging the first community and the second community if the one or more constraints are satisfied, wherein the merging results in a merged community including all of the objects of the first community and the second community (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 6, Pitkow discloses,

one of the plurality of objects is one of the set of core objects for the community of objects, and is one of the set of affiliated objects for another community of objects (column 5 line 64 – column 6 line 1, column 10 lines 15; 26 – 30, et seq.).

Regarding claim 7, Pitkow discloses,



one of the plurality of objects is one of the set of core objects for multiple communities (column 9 lines 40 – 50, et seq.).

Regarding claim 8, Pitkow discloses,

one of the plurality of objects is one of the set of affiliated objects for multiple communities (column 9 lines 40 – 50, column 10 lines 26 – 30, et seq.).

Regarding claim 9, Pitkow discloses,

identifying the set of core objects for the community comprises:

identifying links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

finding groups of objects of the plurality of objects that satisfy a link threshold (column 5 lines 54 – 58, column 7 lines 57 – 65, et seq.); and

identifying, as a core set, one or more of the groups of objects that satisfy the link threshold (column 5 lines 58 – 63, column 7 lines 57 – 66, et seq.).

Regarding claim 11, Pitkow discloses,

expanding the data structure corresponding to the community of objects comprises:

identifying links between objects of the plurality of objects (column 1 lines 30 – 34, column 3 lines 1 – 3, et seq.);

identifying one or more objects of the plurality of objects, wherein a link exists from each of the identified one or more objects to at least one of the core objects of the set of core objects (Figure 5, column 3 line 10, column 5 lines 54 – 63, column 7 lines 64 – 65, column 8 lines 18 – 22, column 10 lines 25 – 30, et seq.); and

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including, in the set of affiliated objects, each of the identified one or more objects (Figure 5, column 10 lines 25 – 30, Figure 2 elements 206 – 207, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1, column 7 lines 8 – 10, et seq.).

Regarding claim 13, Pitkow discloses,

ranking each affiliated object in the set of affiliated objects in accordance with the number of links from the affiliated object to core objects of the set of core objects, wherein affiliated objects having a larger number of links to core objects have higher rankings (column 10 lines 32 – 38, et seq.).

Regarding claim 14, Pitkow discloses,

each of the plurality of objects comprises a document (Figure 5, et seq.).

Regarding claim 15, Pitkow discloses,

identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a citation in one document to another document (Figure 5, column 5 lines 3 – 7, et seq.).

Regarding claim 18, Pitkow discloses,

each of the plurality of objects comprises a web page (column 4 lines 15 – 19, column 5 lines 1 – 7, et seq.).

Regarding claim 19, Pitkow discloses,

identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a hyperlink in one web page to another web page (column 5 lines 1 – 3, et seq.).

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Regarding claim 12, Ikeda discloses a rank is assigned to each object in the set, the object being assigned to a particular concentric portion around the center in accordance with the rank of the object (Figures 6 – 8, column 7 lines 36 – 59, column 23 line 52 – column 24 line 6, et seq.).

Regarding claim 20, Pitkow discloses,

One or more tangible computer readable media having stored thereon a plurality of instructions that, when executed by one or more processors of a device, causes the one or more processors to, at least:

identify, from a plurality of objects, a first collection of objects to be core objects of a community (Figure 2 elements 201 – 205, column 3 lines 1 – 5, column 5 lines 54 – 63, et seq.) by identifying one or more objects that are referenced by at least a threshold number of other objects of the plurality of objects (column 3 line 10, column 5 lines 54 – 63, column 7 lines 64 – 65, column 8 lines 18 – 22, et seq.);

identify, from the plurality of objects, a second collection of objects that are linked to the first collection of objects wherein the second collection of objects are affiliate objects; and

add to the community, the second collection of objects (Figure 2 elements 206 – 207: generating co-citation clusters and document clusters, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1: creating a set of clusters whose elements are indirectly or directly related by co-citation, column 7 lines 8 – 10: topology of a Web site reflects the organization of a community, et seq.), wherein the first collection of objects and the second collection of objects are maintained as distinct

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entities within the data structure (First of all, it is noted that the features upon which applicant relies (Remarks, page 18 lines 10 - 21) are not recited in the rejected claim(s).

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). In addition, the features recited in claim 1 are clearly disclosed by Pitkow: the community of objects correspond to the "collection of documents," the set of core objects that are referenced by at least a threshold number of other objects correspond to the "documents whose cited frequency falls above a specific threshold," and finally the set of affiliated objects correspond to the "documents that are indirectly or directly related by co-citation and cited by other documents."

These document collections are "clustered" and each cluster contains document above specific frequency threshold as well as other documents indirectly or directly related (See column 3 lines 1 - 16, column 5 line 54 - column 6 line 1, column 7 lines 32 - 37, and column 10 lines 15 - 50, et seq.).

Pitkow does not explicitly disclose assigning the first collection of objects to a center portion of a user interface independent model and each object of the second collection of objects to a particular concentric portion around the center of the model.

However, Holbrook discloses assigning the first collection of objects to a center portion of a user interface independent model and each object of the second collection of objects to a particular concentric portion around the center of the model (Figure 4, paragraph 77: the examiner would also like to note that the arrangement of objects shown in Figure 4 supports the inherent data organization in the data structure since,

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without the underlying data structure organized in the way displayed to the user, the display of the categorized objects in concentric circles could not be achieved. Just because the objects are displayed in a certain way, it does not suggest that they are graphics-dependent, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's assignment method would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

Pitkow and Holbrook do not explicitly disclose that each concentric portion represents an importance level to the community and the closer each concentric portion is to the center portion represents a higher level of importance and that each object within each concentric portion shares the same importance level.

However, Ikeda discloses organizing data elements (including documents) in concentric circles, wherein the distance from the center is indicative of similarity of the data element. In other words, if two data elements have the same similarity value, they will be placed in the same concentric circle (Figures 6 – 8, column 7 lines 36 – 59, column 23 line 52 – column 24 line 6, et seq.). Therefore, Ikeda sufficiently discloses concept of placing objects of same similarity value in the same concentric circle, wherein the radius is indicative of the similarity. It would have been obvious to a person of ordinary skill in the data processing art to combine the references because Ikeda's assignment method would have enabled Pitkow and Holbrook's system to arrange a

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plurality of information in correspondence with the distribution of matching levels or relevancy (column 1 lines 40 – 50, et seq.).

Regarding claim 22, Pitkow discloses,

the plurality of instructions, when executed by the one or more processors, further cause the one or more processors to, at least:

identify, from the plurality of objects, additional first collections of objects to be core objects of additional communities (Figure 2 elements 201 – 205, column 3 lines 1 – 5, column 5 lines 54 – 63, et seq.);

identify, from the plurality of objects, additional second collections of objects that are linked to the first collections of objects to be affiliated objects of the additional communities;

add, to data structures corresponding to the additional communities, respective additional first collections of objects; and

add, to the data structures corresponding to the additional communities, the respective additional second collections of objects (Figure 2 elements 206 – 207: generating co-citation clusters and document clusters, Figure 6, column 3 lines 5 – 12; 15 – 16, column 5 line 64 – column 6 line 1: creating a set of clusters whose elements are indirectly or directly related by co-citation, column 7 lines 8 – 10: topology of a Web site reflects the organization of a community, column 6 lines 5 – 6, et seq.);

merge together a first of the communities and a second of the communities in response to a finding of similarity between the core objects in the first of the

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communities and the core objects in the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 23, Pitkow discloses,

wherein the merge results in a merged community including all of the objects of the first of the communities and the second of the communities and having a set of core objects that includes the core objects in the first of the communities and the core objects in the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 59, column 8 lines 15 – 28, et seq.).

Regarding claim 24, Pitkow discloses,

merge together a first of the communities and a second of the communities if there is sufficient similarity between the core and affiliated objects in the first of the communities and the core and affiliated objects in the second of the communities (column 5 line 64 – column 6 line 1, column 6 lines 50 - 67, column 8 lines 15 – 28, column 10 line 15, et seq.).

Regarding claim 26, Pitkow discloses,

the link threshold comprises a minimum number of objects in the plurality of objects that must each link to each object in the group (column 7 lines 56 – 58, et seq.).

Regarding claim 28, Ikeda discloses that a rank is assigned to each object in the collection of objects, based on which object in the collection is assigned to a particular concentric portion around the center of the model (Figures 6 – 8, column 7 lines 36 – 59, column 23 line 52 – column 24 line 6, et seq.).

Regarding claim 38, Pitkow discloses grouping a first collection of a plurality of objects (column 11 line 3: source site, et seq.), grouping a second collection of the plurality of objects (column 11 line 7: destination site, et seq.), and identifying, as the community of objects, the groupings of the first and second collections of the objects (column 10 lines 24 – 30, et seq.).

Pitkow does not explicitly disclose grouping the collection of objects into a center portion and into one or more concentric portions.

However, Holbrook discloses assigning a collection of objects to a center portion of a user interface independent model and another collection of objects to a particular concentric portion around the center in accordance with the rank of the object (Figure 4, paragraph 77: the examiner would also like to note that the arrangement of objects shown in Figure 4 supports the inherent data organization in the data structure since, without the underlying data structure organized in the way displayed to the user, the display of the categorized objects in concentric circles could not be achieved. Just because the objects are displayed in a certain way, it does not suggest that they are graphics-dependent, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because Holbrook's assignment method would have enabled Pitkow's system to concisely present aggregate relevant data to the user and enables the user to efficiently evaluate and review the entire results (paragraph 17).

Ikeda also discloses organizing data elements (including documents) in concentric circles, wherein the distance from the center is indicative of similarity of the



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data element. In other words, if two data elements have the same similarity value, they will be placed in the same concentric circle (Figures 6 – 8, column 7 lines 36 – 59, column 23 line 52 – column 24 line 6, et seq.). Therefore, Ikeda sufficiently discloses concept of placing objects of same similarity value in the same concentric circle, wherein the radius is indicative of the similarity. It would have been obvious to a person of ordinary skill in the data processing art to combine the references because Ikeda's assignment method would have enabled Pitkow and Holbrook's system to arrange a plurality of information in correspondence with the distribution of matching levels or relevancy (column 1 lines 40 – 50, et seq.).

Regarding claim 39, Holbrook discloses both the center portion and the plurality of concentric portions collectively are a set of concentric circles (Figure 4, et seq.).

Regarding claim 40, Holbrook discloses the center portion comprises a circle (Figure 4, et seq.)

Regarding claim 41, Holbrook discloses the each of the plurality of concentric portions comprises a circle (Figure 4, et seq.).

Regarding claim 42, Pitkow discloses the first collection of the objects comprises a core set of objects (column 10 lines 24 – 30, column 11 lines 13 – 14, et seq.).

Regarding claim 43, Pitkow discloses each object of the second collection of the objects comprises an affiliated object (column 10 lines 24 – 30, column 11 lines 13 – 14, et seq.).

Regarding claim 44, Ikeda discloses Ikeda discloses assigning a collection of objects to the center data circle and another collection of objects to a plurality of data

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circles of the set of concentric data circles wherein all of the objects having a same rank are assigned to a same one of the set of concentric data circles (Figures 6 – 8, column 7 lines 36 – 59, column 23 line 52 – column 24 line 6, et seq.).

Regarding claim 45, Pitkow discloses,

at least one reference is associated with a weight corresponding to a type of the at least one reference that is independent of reference frequency (column 10 lines 45 – 46, et seq.).

Regarding claim 46, Pitkow discloses,

each weight corresponds to a numeric value (column 3 lines 9 – 11, column 5 lines 55 – 59, column 7 lines 57 – 65, et seq.); and

the threshold number is a function of, at least, the numeric value corresponding to the weight associated with at least one reference (column 5 lines 55 – 59, et seq.).

Regarding claim 47, Pitkow discloses,

each weight corresponds to a numeric value (column 3 lines 9 – 11, column 5 lines 55 – 59, column 7 lines 57 – 65, et seq.); and

each object in the community is ranked as a function of, at least, the numeric value corresponding to the weight associated with at least one reference to the object (column 10 lines 32 – 45, et seq.).

Regarding claim 48, Pitkow discloses,

the set of core objects;

the set of affiliated objects; and

a programmatic function for measuring a degree of affiliation between two objects of the community based on, at least, the weight associated with at least one reference in a reference chain between the two objects (column 3 lines 9 – 11, column 5 lines 55 – 59, column 7 lines 57 – 65, column 10 lines 32 – 45, et seq.).

**Claim 16 – 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pitkow, Holbrook and Ikeda, further in view of U.S. Publication Number 2006/0031246 issued to Loren P. Grayson (hereinafter “Grayson”).**

Regarding claim 16, Pitkow, Holbrook and Ikeda disclose the method of claim 1 as discussed above.

They do not explicitly disclose each of the plurality of objects comprises a person.

However, Grayson discloses each of the plurality of objects being a person (Figure 21, paragraph 358, et seq.). It would have been obvious to a person of ordinary skill in the data processing art to combine the two references because the combination of the two methods would have provided a system capable of modeling and presenting data of all relationships in a form that supports any data (paragraphs 28 – 29).

Regarding claim 17, Grayson discloses identifying a plurality of links, wherein each link links one object to another object, and wherein each of the plurality of links represents a relationship of one person to another person (Figure 21, paragraph 358, et seq.).

***Allowable Subject Matter***

**The following is a statement of reasons for the indication of allowable subject matter:**

The invention is directed toward community mining based on "core objects" and "affiliated objects."

More particularly, the invention teaches organizing a large number of web pages into **communities of related web pages**, thereby allowing users to quickly and easily view the communities.

Claim 29 teaches the method of identifying communities using link threshold, which is determined by multiplying an amplifying frequency factor by a weight sum of all links, and dividing it by the number of objects selected.

Claim 33 teaches another method of identifying communities based on similarities between the objects, wherein sufficient similarity is found when smallest values from the communities divided by a set that includes all elements that are common to the communities is less than two.

The prior art Pitkow, further in view of secondary references, fails to disclose the aforementioned features in their entirety. Pitkow discloses the method of finding related collections of linked documents using co-citation analysis. However, **Pitkow fails to disclose** that the identification of the communities is done by using **link threshold, which is determined by multiplying an amplifying frequency factor by a weight sum of all links, and dividing it by the number of objects selected.** Pitkow also **fails to disclose** that **similar object within a community is found when smallest values from the communities divided by a set that includes all elements that are**

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**common to the communities is less than two.** These two specific features distinguish the claimed invention from the prior art, and the combination of the Pitkow reference with any of the secondary references failed to render the claims obvious.

For the foregoing reasons, claim 29, 33 and their dependent claims contain allowable subject matter.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SANGWOO AHN whose telephone number is (571)272-5626. The examiner can normally be reached on M-F 10-6.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Tim T. Vo/  
Supervisory Patent Examiner, Art Unit 2168

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